



AIR CONDITIONING, HEATING & REFRIGERATION TECHNOLOGY

Career Technologies

PROGRAM OVERVIEW

The Air Conditioning, Heating, and Refrigeration Technology curriculum provides the basic knowledge to develop skills necessary to work with residential and light commercial systems. Topics include mechanical refrigeration, heating and cooling theory, electricity, controls, and safety.

The diploma program covers air conditioning, furnaces, heat pumps, tools and instruments. Diploma graduates should be able to assist in the start up, preventive maintenance, service, repair, and/or installation of residential and light commercial systems.

PROGRAM HIGHLIGHTS

Southwestern's Air Conditioning, Heating & Refrigeration Technology Program prepares students to assist in the start up, preventive maintenance, service, repair, and/ or installation of residential and light commercial heating and air systems. The program accepts new students in the fall semester and is offered in an evening format on the Sylva Campus. The air conditioning and refrigeration industry is one of the fastest growing occupations in the world today. Southwestern has the resources available to get you started with this exciting career opportunity.

WHY SOUTHWESTERN

- The Air Conditioning, Heating, and Refrigeration Technology program provides students with an opportunity to pursue either a diploma, which can be completed in three semesters, or a certificate, which can be completed in one to two semesters.
- Students within this program learn about and work with state-of-the-industry equipment, which has been donated by companies such as Andrews Auld Heating & Cooling and Lennox International.
- The program trains students to service systems in residential homes, hospitals, government buildings, schools, hotels, apartment buildings, and office buildings.
- Additionally, the program is primarily taught during evenings, and is a flexible option for individuals who work on a full-time basis.
- Small classes ensure that students receive personalized instruction from faculty who have extensive experience working with HVAC technology.

AFTER GRADUATION

The HVAC field is changing rapidly and it will require technicians be trained in higher education. The US Department of Labor states, "The continuing focus on improving indoor air quality should contribute to the growth of jobs for heating, air-conditioning and refrigeration technicians" (U.S. Dept of Labor Occupational Outlook Handbook, 2007). Upon successful completion of this program, graduates will have a foundation of knowledge in mechanical refrigeration, heating and cooling theory, electrical controls, and safety. Graduates are qualified to seek employment with heating and air contractors or on-site maintenance teams.

EMPLOYMENT OPPORTUNITIES EXIST AS:

- Advertising Agencies
- Colleges & Universities
- Construction Companies
- Food and Beverage Distributors
- Heating and Air Maintenance Companies
- Private Contractors

TOP RECENT EMPLOYERS

- Residential HVAC/R Technician
- Commercial HVAC/R Technician
- Industrial HVAC/R Technician
- Mechanical Contractor HVAC/R Technician
- Facilities HVAC/R Technician
- Wholesale Service Representative
- Energy Management Technician
- Business Owner HVAC/R
- Practice Engineering of HVAC/R Systems
- Andrews Heating and Air Cooling, Inc.
- Lowes Home Improvement
- H.E.L.P. A/C & Refrigeration

NC STATE ESTIMATED ENTRY WAGE

\$29,418 - \$39,508

* Information found through the North Carolina Occupational Employment & Wages 2010

PROGRAM CONTACT INFORMATION

Career Technology Division

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Admissions Office

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DIPLOMA D35100

REQUIRED COURSES:

<u>Prefix</u>	<u>Number</u>	<u>Title</u>	<u>Class</u>	<u>Lab</u>	<u>Clinical</u>	<u>Credit</u>
AHR	110	Intro to Refrigeration	2	6	0	5
AHR	112	Heating Technology	2	4	0	4
AHR	113	Comfort Cooling	2	4	0	4
AHR	114	Heat Pump Technology	2	4	0	4
AHR	120	HVACR Maintenance	1	0	3	2
AHR	210	Residential Building Code	1	2	0	2
AHR	211	Residential System Design	2	2	0	3
ELC	111	Intro to Electricity	2	2	0	3
ENG	111	Expository Writing	3	0	0	3
MAT	101	Applied Mathematics I	<u>2</u>	<u>2</u>	<u>0</u>	<u>3</u>
		Totals	19	26	3	33

CHOOSE 6 CREDITS FROM THE FOLLOWING COURSES:

AHR	212	Advanced Comfort Systems	2	6	0	4
CIS	110	Introduction to Computers	2	2	0	3
CIS	111	Basic PC Literacy	1	2	0	2
COE	111	Co-op Work Experience I	0	0	10	1
COE	112	Co-op Work Experience I	0	0	20	2
COE	114	Co-op Work Experience I	0	0	40	4
ELC	112	DC/AC Electricity	3	6	0	5
MAT	115	Mathematical Models	2	2	0	3
WLD	110	Cutting Processes	1	3	0	2

Total Semester Hour Credits: 39

CERTIFICATE C35100

FALL SEMESTER 1

<u>Prefix</u>	<u>Number</u>	<u>Title</u>	<u>Class</u>	<u>Lab</u>	<u>Clinical</u>	<u>Credit</u>
AHR	110	Intro to Refrigeration	2	6	0	5
AHR	120	HVACR Maintenance	1	0	3	2
ELC	111	Intro to Electricity	<u>2</u>	<u>2</u>	<u>0</u>	<u>3</u>
		Totals	5	8	3	10

SPRING SEMESTER 1

AHR	112	Heating Technology	2	4	0	4
AHR	113	Comfort Cooling	<u>2</u>	<u>4</u>	<u>0</u>	<u>4</u>
		Totals	4	8	0	8

Total Semester Hour Credits: 18

FACULTY

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